DOCUMENT RESUME

ED 239 443 EC 161 180

AUTHOR McCabe, Ann E.; Bebout, Linda J.
TITLE Style Characteristics of the Language Acquisition of Mentally Retarded Children.
PUB DATE Aug 83
NOTE 15p.; Paper presented at the Annual Meeting of the American Psychological Association (91st, Anaheim, CA, August 26-30, 1983).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Developmental Stages; *Language Acquisition; *Learning Processes; *Mental Retardation; Young Children

ABSTRACT

Six mildly to moderately retarded children (2-5 years old) were studied to compare their pattern of language development with that of nonhandicapped young children. Tape recordings of Ss' spontaneous speech at home were examined and compared to data on normal development according to such variables as differential noun/pronoun use, noun type/token ratio, elaboration of noun phrases, use of descriptive adjectives and possessives, and speech function. Data suggested that Ss showed an expressive style (a low proportion of common nouns with relatively high proportions of pronouns, function words, and personal social words in their early vocabulary) as opposed to the referential style (characterized by a high proportion of common nouns). Implications for assessment and intervention center on the importance of understanding the characteristics of the expressive style. (CL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
✓ This document has been reproduced as received from the person o. organization c riginating it.
Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED239443

Style Characteristics of the Language Acquisition of Mentally Retarded Children*

Ann E. McCabe, Ph.D.
Department of Psychology
University of Windsor
Windsor, Ontario, Canada N9B 3P4
and
Linda J. Bebout, Ph.D.
Department of English
University of Windsor

*Paper presented at 91st Annual Convention of the American Psychological Association at Anaheim, CA, August, 1983.

EC161180

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Ann E. McCabe
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

STYLE CHARACTERISTICS OF THE LANGUAGE ACQUISITION

OF

MENTALLY RETARDED CHILDREN

The present study examines the question of whether retarded children's pattern of language development differs in kind or merely in degree from that of normal children. Although this question has been asked by other investigators, the justification for the current study is twofold, involving both the methodology and the focus of the question.

The methodological justification is that the bulk of the literature in this area has dealt with populations which were (1) institutionalized and (2) observed cross-sectionally. However, most of the comparison data (that on normal children's language acquisition) has come from the study of children living at home. Moreover, if one is to examine patterns of development, it would seem necessary to consider longitudinal data. Thus, in order to make valid comparisons with the data from normal children, we considered it essential to gather longitudinal data from retarded children living at home.

The second justification is that the literature on normal children's language acquisition has grown dramatically since the earlier studies of retarded children and has introduced some new and significant dimensions to the considered. It is one of these new dimensions, that of individual differences, which will be the focus of the present paper.

Throughout much of the sixties and seventies, the primary focus of students of child language was on the regularities in patterns of acquiring language across children, both within and across cultures. Individual differences in these patterns were generally treated as error variance. One of the few investigators to take special notice of individual differences at that time was Nelson (1973), who described stylistic differences in the early vocabulary acquisition of a group of children she had been studying. Since that report, a number of other investigators (e.g., Bloom, Lightbown, & Hood, 1975; Clark, 1974; Hogan, 1980, 1981; Peters, 1977) have documented individual differences in acquisition patterns.

Two characteristic acquisition styles has emerged. The first is variously referred to as "referential" (Nelson, 1973, 1975, 1976, 1981), "nominal" (Bloom et al., 1975), "noun lover" (Horgan, 1980) and "analytic" (Peters, 1977). Children showing this style typically include a high proportion of common nouns in their early vocabularies, proceed regularly from single-word to two-word to three-word utterances, have comparatively large vocabularies at the early stages of language acquisition, and use language primarily as a tool

for finding out about the inanimate world. On the basis of published data, we can estimate that about 60 percent of normal children tend toward this style.

The second style has been called "expressive" (Nelson, 1973, 1975, 1976, 1981), "pronominal" (Bloom et at., 1975), "nour leaver" (Horgan, 1980) and "gestalt" (Peters, 1977). Children who show this style characteristically have a low proportion of common nouns in their early vocabularies, but relatively high proportions of pronouns, function words and personal-social words. They include complete sentences or phrases in their very early speech and proceed to combine the phrases with other words as if they were single words, only later analyzing them into their component parts. These children typically have relatively small vocabularies early in language development, and appear to use language primarily for interpersonal interaction. It would appear from the literature that approximately 40 percent of normal children exhibit this style in their language development.

However, despite the evident recent interest in this topic where normal children's acquisition is concerned, there have been no reports of examinations of style characteristics in the language acquisition of mentally retarded children. It is such an examination which is described in the present paper.

METHODOLOGY

The subjects for the study are six mildly to moderately retarded children who ranged in age from two years, three months (2;3) to 5;8 (mean age = 4;7) at the start of the study. The etiologies of the children's retardation are mixed, with five known (two Down's syndrome, two hydrocephalic, one microcephalic) and one unknown. Three of the children are boys and three are girls. All children had begun producing word combinations at the start of the study, when MLUs ranged from 1.63 to 4.19, calculated according to the method described by Brown (1973) and modified by Nelson (1973).

Data, in the form of tape recordings of the child's spontaneous speech, were collected during periodic visits to the children's homes. Data collection has been carried out for the past four years. During the first two years of the study, visits were made on a monthly basis, with sessions lasting from one half to one hour. Subsequently, visits were and are being made on a yearly basis, with sessions lasting at least one hour. Tape recordings are transcribed as soon as possible following the visit using standard format and conventional orthography. For the present analysis, four transcripts for each child were selected, recorded at approximately one year intervals.

Data for the analyses were selected as follows: 100 consecutive intelligible utterances were extracted from each transcript, deleting

utterance repetitions. Transcripts were divided into three groups based on MLU: (1) less then 2.5, (2) between 2.5 and 4.5, and (3) greater than 4.5. This division was made to facilitate comparison with previously published data. [1]

RESULTS AND DISCUSSION

There are six main variables to be examined. Each will be reported along with comparison data from normal referential and expressive[2] children which has previously appeared in the literature.

The primary dimension along which referential and expressive children have been distinguished is that of differential noun/pronoun use. While nouns predominate over pronouns in the early speech (MLU below 2.5) of referential children, expressive children use approximately equal numbers of nouns and pronouns. Nelson (1975) has reported that at MLU levels of 2.5 and lower, 73.7 percent of all the nominals (nouns and pronouns) used by her referential subjects were nouns, whereas only 49.8 percent of the nominals used by her expressive subjects were nouns. At MLUs of from 2.5 to 4.5, expressive children maintained approximately equal noun/pronoun use (48.4 percent nouns), while referential children's noun use dropped to 40.4 percent.

For children in the present study, noun use at MLUs of less than 2.5 was 53.2 percent, at MLUs of 2.5 to 4.5 it was 38.9 percent, and at MLUs over 4.5 it was 34.4 percent. (Figure 1) Thus, at low MLUs, the retarded children appear to be most similar to normal children in the expressive category. At higher MLUs these dchildren are more similar to referential children. However,it should be noted that these children, unlike normal referential children, did not go through an early period of high noun use, nor did they later show a drop in the number of nouns used. This difference will be discussed below.

Children who exhibit differential preferences for noun and pronoun use have also been shown to differ on a second dimension, that of noun type/token ration. At MLUs less than 2.5, Nelson (1975) has reported noun type/token ratios of .527 (referential) and .409 (expressive). For MLUs of from 2.5 to 4.5 she reports corresponding ratios of .652 and .572.

---

1. Although only one published study reports data for children with MLUs greater than 4.5, such data will be reported throughout this study for illustrative purposes.

2. Nelson's terms will be used in this paper to refer to the two styles described above on page 1, both because they were the first terms used in the literature and because they seem to best characterize the types of language produced.

Our retarded children had noun type/token ratios of .366 at MLUs less than 2.5, .575 at MLUs of 2.5 to 4.5, and .571 for MLUs greater than 4.5. (Figure 2) These ratios are highly to those of Nelson's expressive children, and reflect a tendency to use the same nouns repeatedly, which contrasts with the referential style of more varied noun use. Interestingly, there were several instances of the retarded children using a particular noun as if it were a pronoun; for example, one child used car to label a wide variety of objects, including books and ears as well as cars.

Looking at slightly more advanced language learners (MLUs of 3.2 to 5.4), Horgan (1981) has noted a difference between children she has called "precocious" and"slower". [3] The style characteristics of her precocious learners are similar to that of Nelson's referential children, while her slower learners are more similar to expressive children. Hogan has reported a difference between the two groups in the degree of elaboration of noun phrases (as indexed by preverb sentence length). Precocious learners show a greater elaboration of noun phrases than do slower learners, leading to a mean preverb sentence length of 1.4 for the former (referential-type children) and 1.1 for the latter (expressive).

Corresponding data from children in the present study were 0.8 for MLUs less than 2.5, 0.9 for MLUs from 2.5 to 4.5, and 1.0 for MLUs greater than 4.5. (Figure 3) Although MLU categories are not strictly comparable across the two sets of data, Horgan's subjects are approximately equivalent to the retarded group at the two higher MLU levels. Again the retarded children show characteristics which are most similar to those of the group of normal children falling into the expressive classification.

Nelson (1976) has also reported a difference between referential and expressive children in their use of descriptive adjectives and possessives. At low MLUs (below 2.5), groups showed an approximately equal ratio of possessives to adjectives (.786 for referential and .753 for expressive). However, at higher MLUs (2.5 - 4.5), expressive-style children used a high proportion of possessives (possessive/adjective = 1.052), while referential children used a much lower proportion (possessive/adjective = .209).

---

3. Despite Hogan's choice of terms, it must be noted that neither of the styles being discussed in this paper should be considered inferior to the other. They are simply different paths to the destination of language competence. Both styles have been found among normal children ranging in intellectual ability from superior to average. It is unfortunate that the referential style has been over-represented in the literature on language acquisition; as a result, it has come to be viewed as a standard against which all child language is to measured.

Children in our study show a comparatively low proportion of possessives at MLUs less than 2.5 (.486), but increasing use of possessives at higher MLUs (MLU 2.5-4.5, .614; MLU over 4.5, .970). (Figure 4) Thus, even though early use of possessives is low, the retarded children's pattern more closely resembles that of expressive than referential children.

Another salient dimension which has been found to differentiate the two style groups is speech function. Several investigators (Hogan, 1980; Nelson, 1973, 1981) have reported that expressive children tend to use language primarily for interpersonal interaction, while referential children use language more for finding out about the inanimate world. The only published data on pragmatic analyses for style groups, however, is that reported by Nelson (1981). Those data are from children with MLUs of 2.25 or less and are taken from spontaneous utterances produced by children during a word learning task. Among referential children, 34.1 percent of their utterances were related primarily to objects, while 11.7 percent were related primarily to persons (personal-social). For expressive children, 22.5 percent of their utterances were primarily object-related, with 27.5 percent primarily personal-social.

Data from our study indicate that for retarded children at low MLUs (below 2.5), 39.0 percent of their utterances were object-related and 42.3 percent person-related. For MLUs between 2.5 and 4.5, 31.5 percent of their utterances were object-related and 46.0 percent person-related. At MLUs over 4.5, the proportions were 36.6 percent for object-related and 50.3 percent for person-related categories. (Figure 5)

The important point here is that the relative proportions in the two categories are similar to those reported for normal expressive children. The overall higher percentages for the retarded children reflect the fact that they made relatively little use of functions which combine person and object orientations, while these functions were frequently used by Nelson's subjects. These differences might be due either to the differential task demands (i.e., a word learning task for Nelson's subjects and a free play situation for our subjects) or the differential ages of the children (20 months for Nelson's and 4+ years for ours) or both.

Finally, expressive children have frequently been reported to use phrases or sentences which appear to have been learned as a complete unit rather than constructed by the child from individual words (Clark 1974; Nelson, 1973; Peters, 1977). These phrases and sentences are typically uttered very quickly with no hesitations between words or phrases. Frequently, the learned units are poorly articulated and may go unnoticed in early child speech because they are classified as uninterpretable utterances. Although data relating to such units are difficult to quantify, there are numerous examples of them which appear in speech of our children. These unanalyzed phrases become apparent

when the child has incorrectly segmented the phrase before combining it with another phrase or word, as in the following (phrases appear in square brackets):

(a) "[I want something] that."

(b) "[Set it down] my pen."

(c) "Another [read the book]."

(d) "[Give the] momma [read the book]."

(e) "Are we gonna go swinging up to the [pie]?"[4]

(f) "(There) [broken there] all up."

(g) "[That my] mine."

Such unanalyzed phrases or sentences also are noticeable when the child responds to the statement of another person or to a situation with a somewhat inappropriate statement such as in the following:

(a) "That's nothing": in response to an adult question, "Who did you see at school today?"

(b) "Tell me what de saying honey": as a comment when child was playing alone with a puzzle.

(c) "Leave Joan alone": as child approached interviewer, Joan.

(d) "Stand right here in the corner don't move": as child and mother were talking about who went swimming.

We believe that these data strongly suggest that retarded children, at least those being observed in the present study, show an expressive style. On virtually all of the measures considered, these retarded children's language is highly similar to that of normal expressive-style children. The only measure where this is not true is that of proportional noun/pronoun use at MLUs above 2.5. Early reports from several investigators (Bloom et al., 1975; Nelson, 1975) argued that around an MLU of 2.5, children from the two style groups begin to converge, at least with respect to noun/pronoun use. At that point, children who were previously high noun users increased their use of pronouns, and high pronoun users increased their use of nouns. It does not appear that the retarded children show this convergence, at lease at MLUs currently observed. It is possible that such convergence may be noted at later stages among these children.

---

4. Of. the normal conversational pronunciation of the phrase "up high".

Nevertheless, the bulk of the evidence supports the contention that the retarded children fit into the expressive style category. These findings raise important considerations concerning the assessment of and intervention into the language acquisition process of retarded children.

Regarding assessment, it can be predicted that because of their focus, retarded children will do especially poorly on vocabulary measures. Such measures are thus likely to substantially underestimate their language ability. On measures of syntactic development, they are likely to do considerable better. For example, among children in the present study, pronoun case or gender errors were extremely rare.

Our results are potentially even more significant for intervention. Although the data are sparse, there are indications (Nelson, 1973) that a mismatch between the child's language style and that of his or her caregivers may slow down the language acquisition process. Clearly, retarded children cannot afford to be further delayed in their development of language.

In conclusion, the data presented here suggest that retarded children's language is most characteristic of the expressive style noted by a number of investigators. In order to optimize the opportunities for these children to become truly competent language users, it is important that such style characteristics be recognized.

References

Bloom, L., Lightbown, P., & Hood, L. (1975). Structure and variation in child language. Monogr. Soc. Res. Child Devel., 40, Ser. No. 160.

Brown, R. A First Language: The Early Stages. (1973). Cambridge Mass.: Harvard Univ. Press.

Clark, R. (1974). Performing without competence. J. Child Lang., 1, 1-10.

Horgan, D. (1980). Nouns: Love 'em or leave 'em. In V. Teller & S. White (Eds.), Studies in Child Language and Multilingualism. New York: New York Academy of Sciences.

Horgan, D. (1981). Rate of language acquisition and noun emphasis. J. Psycholing. Res., 10: 629-640.

Nelson, K. (1973). Structure and strategy in learning to talk. Monogr. Soc. Res. Child Devel., 38, Ser. No. 149.

Nelson, K. (1975). The nominal shift in semantic-syntactic development. Cog. Psychol., 7: 461-479.

Nelson, K. (1976). Some attributes of adjectives used by young children. Cognition, 4, 13-30.

Nelson, K. (1981). Individual differences in language development: Implications for development and language. Devel. Psychol., 17: 170-187.

Peters, A. (1977). Language learning strategies: Does the whole equal the sum of the parts? Lang. 53:560-573.

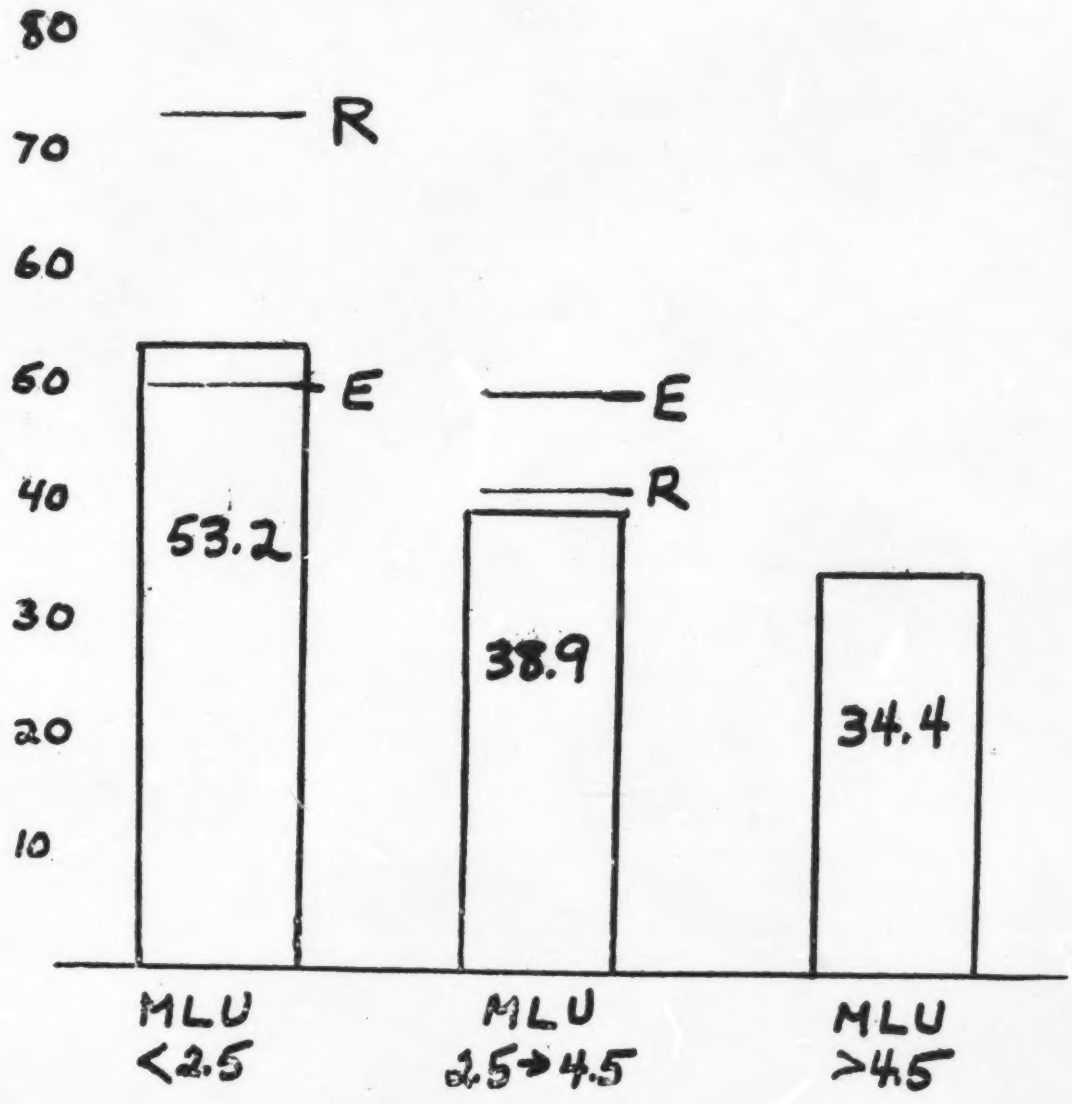

FIGURE [illegible] PERCENT NOUNS
[illegible] ALL NOMINALS

Note: "E" + "R" levels are from Nelson (1975)

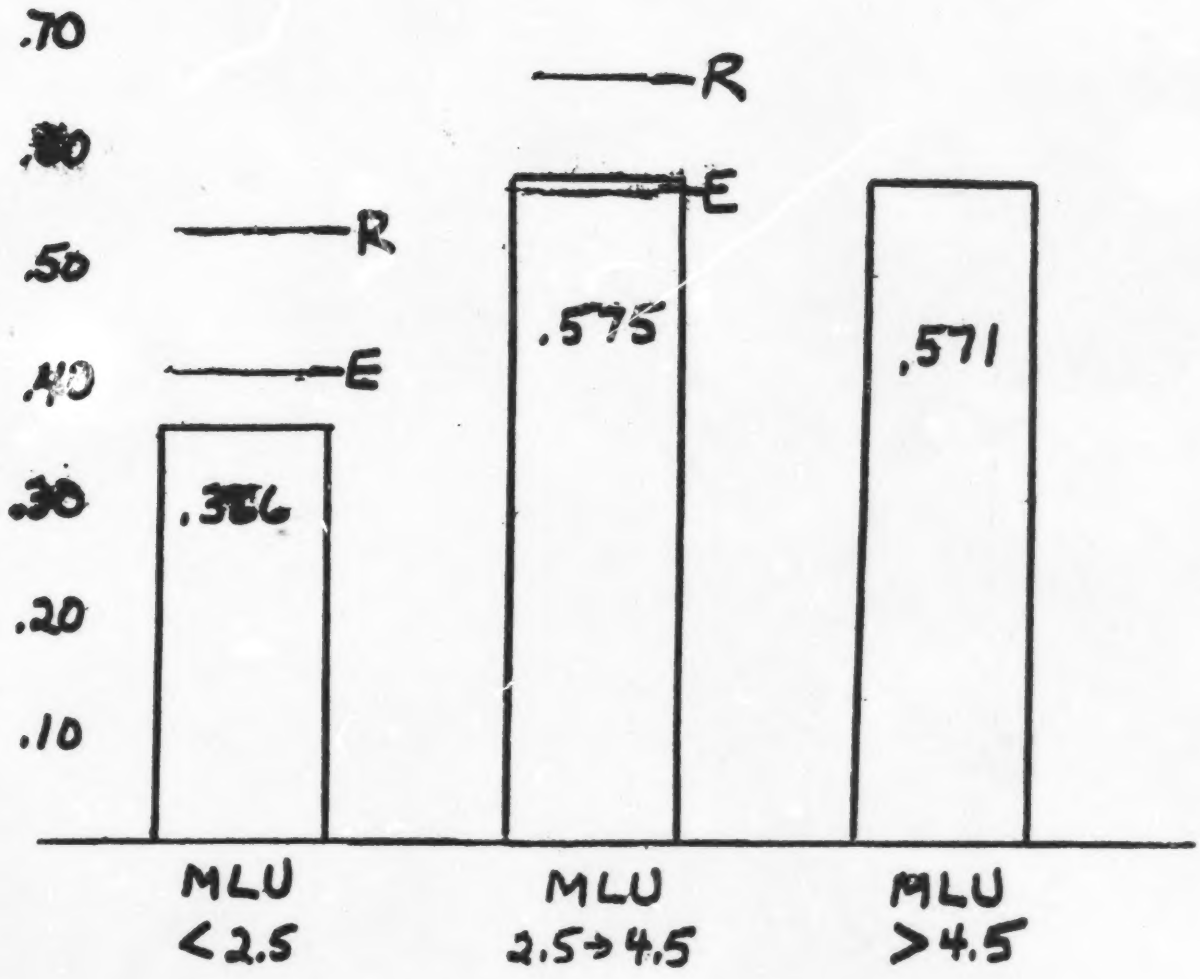

FIGURE 2. NOUN TYPE / TOKEN RATIO

Note: "E" + "R" levels are from Nelson (1975)

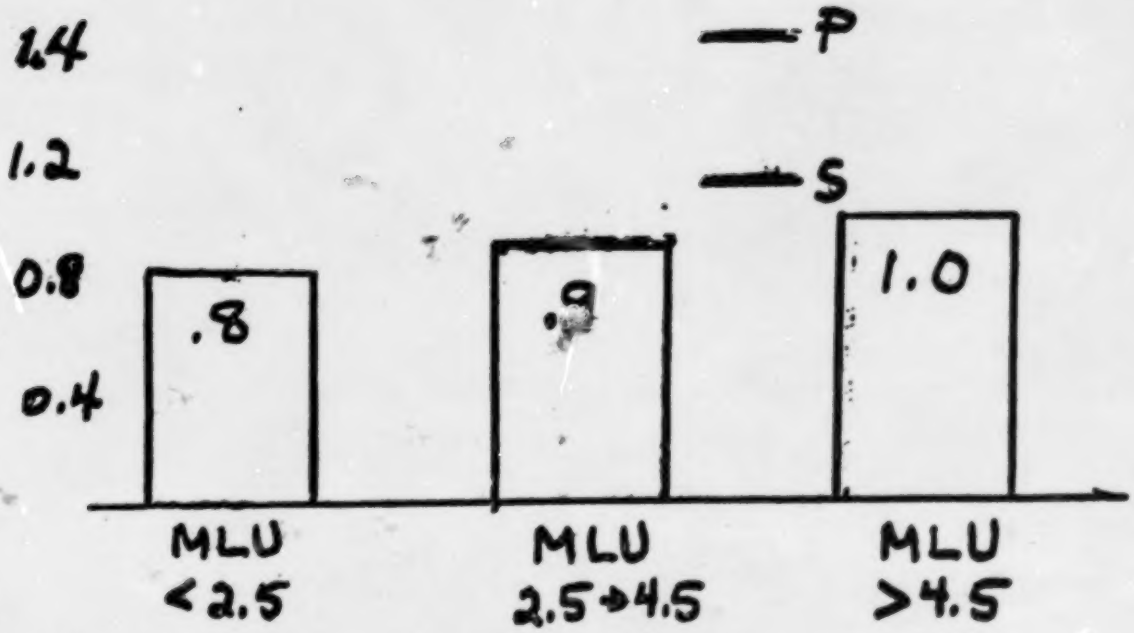

FIGURE 3. MEAN PREVERB LENGTH

Note: "P" + "S" levels are from Horgan (1981)

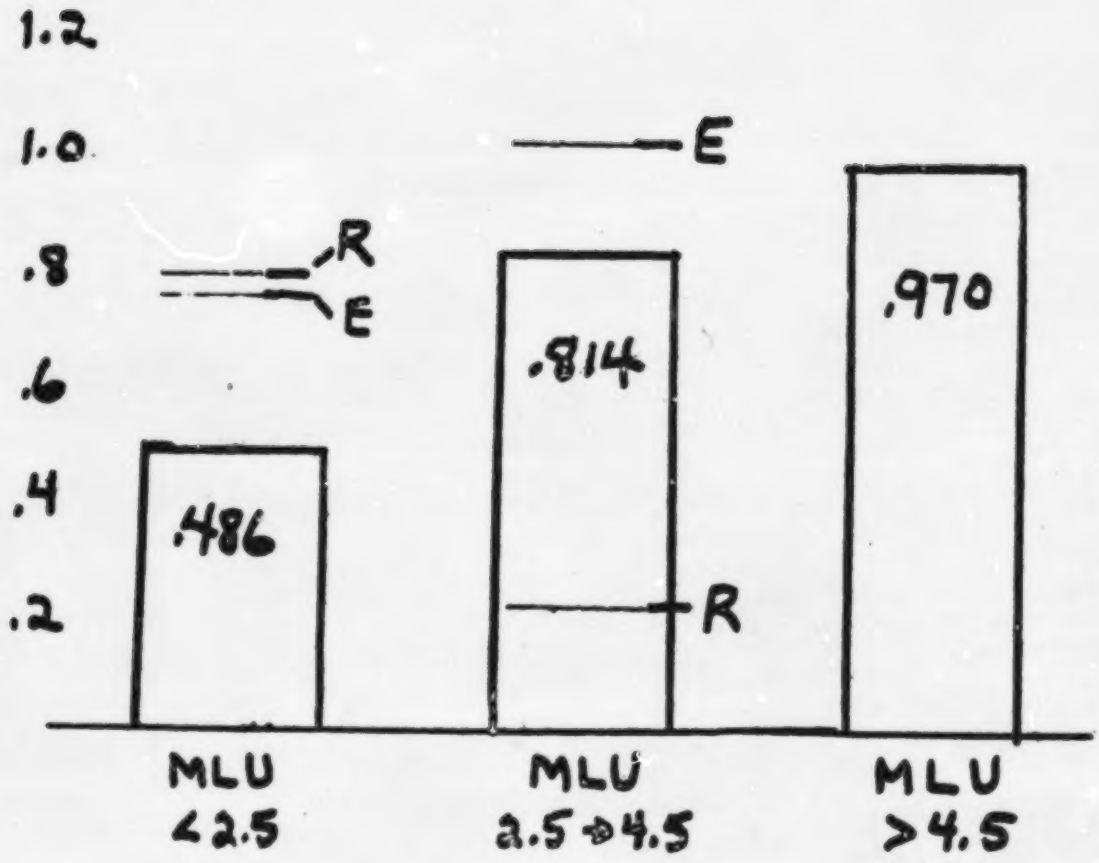

FIGURE 4. POSSESSIVE/ADJECTIVE RATIOS

Note: "R" & "E" levels are from Nelson (1976)

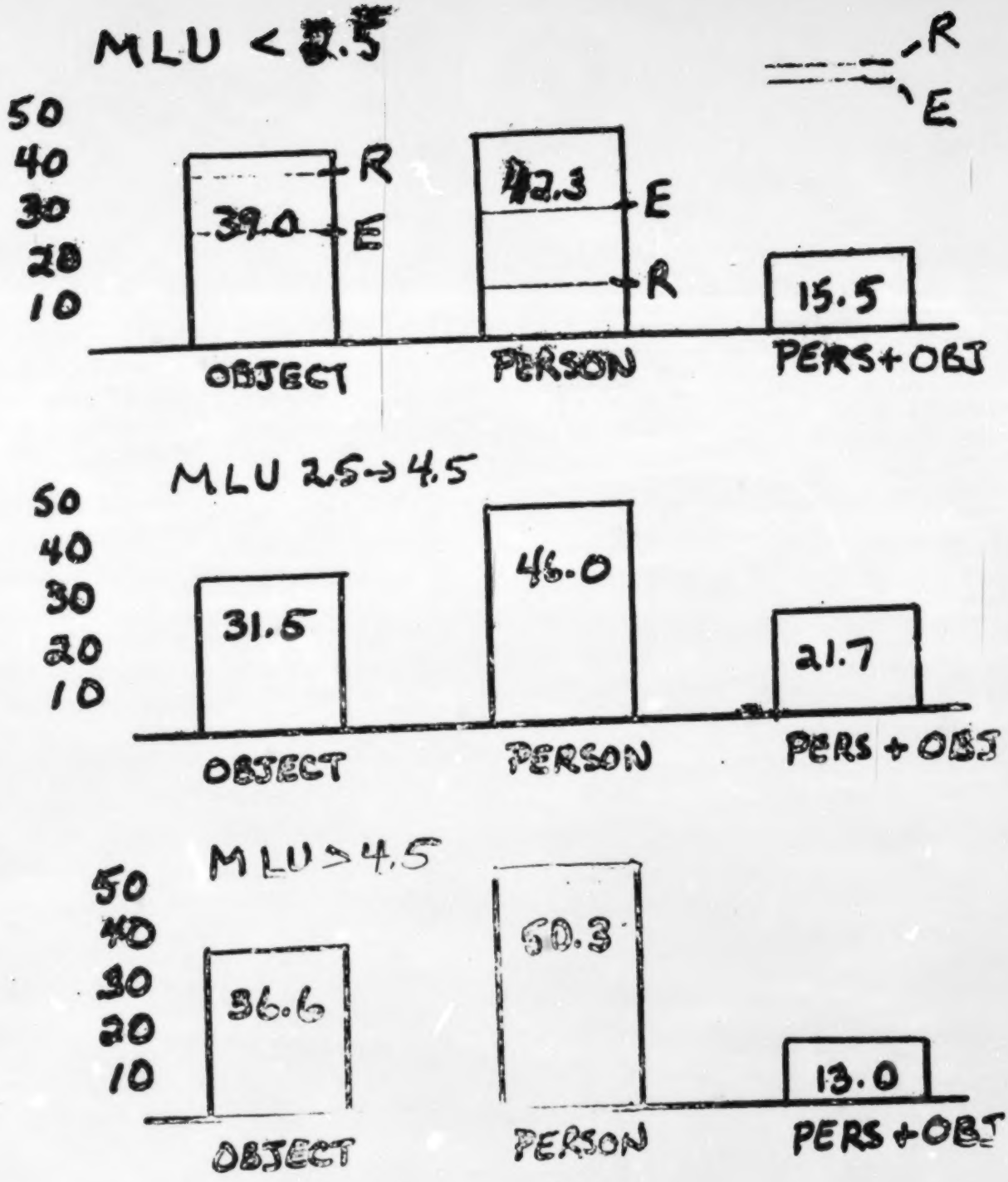

FIGURE 5. FUNCTIONAL ANALYSIS

Note: "R" + "E" levels are from Nelson (1981)